

Currently, morphological processing of words is viewed to have two routes: a whole-word access route and a decompositional route. Which route prevails is presumed to depend on frequency of the word, where more frequent words are assumed to be processed via the whole-word route and the less frequent words via the decomposition route (Caramazza et al.1988; Wurm 1997). However, newer research in English and Italian shows that the relevant factor is not absolute, but relative frequency (Hay 2001; Hay 2002; Hay and Baayen 2002; Burani and Thornton 2003). The purpose of this paper is to further investigate relative frequency effects on the basis of experimental evidence in Russian.

The experiments investigate the following: relative frequency effects in Russian prefixed words, differences between more frequent and less frequent prefixes, differences in effects between free and bound roots, and cumulative root frequency effects. These are reaction time experiments that test prefix separability: subjects are asked if a certain word contains a certain Russian prefix. A longer reaction time is presumed to mean that in that particular word the prefix is harder to separate. Test items include words with bound roots, where bound roots are split into three categories: completely bound, bound within part of speech, and modified and free otherwise; and words with free roots, split into two sets: one where the base frequency is larger than the word frequency and the other one where the base frequency is smaller than the word frequency.

Preliminary results demonstrate that relative frequency effects do appear in Russian prefixed words. Reaction times for words where the base frequency is larger than the word frequency are lower than for words where the base frequency is smaller than the word frequency. This effect is the same independent of the frequency of the prefix: similar reaction times are obtained for a very frequent and an infrequent prefix. There is also an effect of more frequent versus less frequent bound roots; however, it is much weaker than the relative frequency effect in words with free roots. Thus, reaction times for words with more frequent bound roots are lower than reaction times for bound roots that are not as frequent; however, overall these reaction times are much longer than reaction times to words with free roots. Overall, bound roots present a continuum in terms of processing: words with roots bound completely exhibit the longest reaction times, words with roots that are bound within part of speech exhibit the shortest reaction times, and words with bound roots that are modified versions of free roots are in the middle.

These results are compatible with a network theory of morphology (Bybee 1985, Langacker 2002, Booij 2005, Bochner 1993), where only words are units (form/meaning pairings) with frequency information associated with them. In addition, the results provide cross-linguistic evidence of relative frequency effects, suggesting a universal principle of word organization.

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